

Regeln

You have 25 minutes to submit answers. There are 11 questions and a correct answer is always a positive real number i.e. question i has answer $\theta_i \in \mathbb{R}_+$ for $i = 1, 2, \dots, 11$. Submissions are made in the form of an interval:

$$[\text{Min}, \text{Max}]$$

Note that both endpoints are included. Each team has 16 guesses hence multiple submissions for questions is possible although the score will always be based on the latest submissions to the questions. Submissions can be made throughout the quiz. The team's score is given by the formula:

$$\left(10 + \sum_{i: \text{Min}_i \leq \theta_i \leq \text{Max}_i} \left\lfloor \frac{\text{Max}_i}{\text{Min}_i} \right\rfloor \right) \cdot 2^{11 - \# \text{correct guesses}}$$

Where $\lfloor \cdot \rfloor$ is the floor function.

Hence, at the beginning of the quiz all teams have a score of $(10 + 0) \cdot 2^{11-0} = 20480$ points.

When the time is up, the team with the **lowest** score wins.

When submitting an interval it must clearly state:

- Team
- Question
- Interval.

Using scientific notation is allowed but must follow the conventions of R e.g.:

100 = 1e2

93.000 = 93e3

1.010.000.000 = 101e7

etc.

After submission the team (and everybody else) will be able to see whether the guess is correct or not and if so the value of the answer in the sum i.e. $\lfloor \text{Max}_i / \text{Min}_i \rfloor$ as well as the updated total score.

Fragen

1. Antal sendte afsnit af *Snurre Snups søndagsklub*.
2. Antal dage Robert Mugabe besad embedet som Zimbabwes præsident.
3. Antal Beatles sange hvor Ringo Starr er krediteret som "sole composer".

4.

$$\int_1^3 \int_1^3 \int_1^3 x^{y^z} dx dy dz$$

5. Hvor mange gange større end den mindste stat, er den største stat i USA (af USAs 50 stater, målt på land-areal) ?
6. Hurtigst scorede mål i sekunder i en Champions League Finale, siden turneringens start (den gang kaldt Den Europæiske Mesterholdsturnering) i 1955-56 sæsonen.
7. Lad X_1, X_2, \dots være en iid følge af stokastiske variable, $X_1 \sim Unif(\{1, 2, 3, 4, 5, 6\})$.
Definer

$$\tau = \inf\{n \geq 4 : X_{n-3} = X_{n-2} = X_{n-1} = X_n = 6\}$$

Hvad er $\mathbb{E}(\tau)$?

8. Højden i meter af højeste punkt i landet (sovereign state) med laveste højeste punkt i Sydamerika.
9. Hvor mange flere stemmer fik Stram Kurs end Kristen Demokraterne ved Folketingsvalget 2019?
10. Antal atomprøvesprængninger udført af Frankrig.
11. Antal Streamninger af "Take Me to Church" af Hozier på Spotify pr. 22 Oktober 2019.